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Abstract

The purpose of this paper is to identify what factors influence address forms between young Latter-day Saint adults. This study fills a gap in previous research since it focuses on interactions between people that are not in a clear non-reciprocal relationship. A survey was administered to members of a Latter-day Saint (Mormon) congregation within a particular age range. This provided data on when participants call each other by first name instead of the customary Brother or Sister + last name, which was then analyzed using a logistic regression model. The results from this study show that when the more predominant variables such as age, power, and status are kept constant, variation still exists as speakers react to other, subtler factors such as situation, social networks, parenthood, and being southern. This study uncovers some of these less obvious factors and how they interact with each other, showing that forms of address in LDS communities are influenced by a complex web of variables, and that forms of address in reciprocal relationship is just as variable as those in non-reciprocal relationships.

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1 Introduction

When studying forms of address, researchers are interested in whether speakers call someone by their first name (FN) or by a title followed by their last name (TLN)¹ (Brown and Ford 1961). This is an interesting variable because it usually only occurs in communities where potentially all members have a title. Elsewhere, it is generally on the decline in the United States (Murray 2002). Yet, among members of the Church of Jesus Christ of Latter-day Saints (Mormons), the use of titles is active and robust. The goal for this study is to show what factors affect forms of address in Latter-day Saint (LDS) communities, specifically targeting interactions between young adults.

2 Literature Review

Modern English does not have a grammatical *T-V* distinction as in many European languages, so this information is conveyed by the use of titles. These include professional titles (Dr., Judge, President, Headmaster), military ranks (Sgt., Cpt., Lt.), religious titles (Pastor, Father, Bishop), or general titles (Mr., Miss, Ms., Sir, Ma'am). The use of these titles depends on the relationship between the speaker and the person whose name is being used.

Brown and Gilman's seminal work discusses power and solidarity in *T-V* distinction (Brown and Gilman 1960). They show that if one person has sufficient power over another, to the point of having some influence on the other's actions, the superior addresses the inferior using a *T* form while the response by the inferior is the *V* form. On the other hand, if two people share some meaningful social attribute they form solidarity and address each other with the *T* form (1960:225–258).

This first pattern is defined as a *non-reciprocal relationship* between the two people, since they use different names for each other (Brown and Ford 1961). Such relationships arise due to long term servitude such as employer-employee or master-butler, service encounters such as between workers and customers (Slobin, Miller and Porter 1968), or status differences in courtroom settings (Ervin-Tripp 1971). This relationship may also occur between people given a sufficiently large age difference of approximately 15 years (Brown and Ford 1961:377). Murray (2002:55) points out however, that in the last 40 years, the social, status, or age difference in which FN is appropriate has expanded. Specifically, the 15-year age difference is now approximately 40 years.

In addition to power and age differences, the sex of the speaker and the addressee are significant factors in non-reciprocal relationships (Kramer 1975, Fogg 1990). For example, younger female professors were addressed by their first name more than their male colleagues and female students called professors by their first name more than male students (Rubin 1981, see also Takiff, Sanchez and Stewart 2001). More recently, it was found that the media referred to Senator Hillary Clinton by her first name more than they did for male politicians (Uscinski and Goren 2010).

In contrast to this are *reciprocal relationships* where both people address each other using the same form (Brown and Ford 1961). Within these relationships there are Mutual TLN and Mutual FN dyads. The first is reserved for newly acquainted adults, while the second is used when these strangers get to know one another, and in essentially all other situations. However, Brown and Ford say that the Mutual TLN stage does not last long, and quickly transitions into Mutual FN:

“[I]n modern American English the distance between the two points is small with the Mutual FN usually representing only a very small increment of intimacy over the Mutual TLN; as small sometimes as 5 minutes of conversation. Because the segment of the line that lies between the two patterns is usually so very short, it is not easy to make out its exact character.” (Brown and Ford 1961:377).

¹Other choices occur, such as title + first name + last name (TFLN), last name only (LN), and others permutations. This study is only concerned with the primary options mentioned above.

This statement is supported by the dearth of studies on reciprocal relationships. In fact, Ervin-Tripp dismisses Mutual TLN forms from the start:

“Familiarity is not a factor within dyads of the same age and rank, and *there are no options*. For an American assistant professor to call a new colleague of the same rank and age ‘Professor Watkins’ or ‘Mr. Watkins’ would be considered strange, at least on the West Coast” (Ervin-Tripp 1971:19, emphasis added).

Fogg (1990:147) reports the same trend in his data. These studies choose not to study address forms because they dismiss any possibility of variation.

One of the goals for this paper is to supplement existing literature on forms of address by identifying some of the “exact character” of this brief transition phase from Mutual TLN to Mutual FN, and to show that there are options, indeed based on familiarity, among people of the same age and rank.

2.1 Latter-day Saints

Latter-day Saints form an ideal community for a study on address forms because there are strong cultural norms for members to refer to each other by the titles *Brother* or *Sister* followed by the person’s last name.² Yet this tradition interacts with the general tendency to use FN to form solidarity. It appears that the choice between these two is largely unnoticed by many members, making it an ideal sociolinguistic variable.

One study has analyzed forms of address among Mormons. Fogg (1990) observed address forms in six LDS congregations in Utah, and found that formality was the strongest predictor, with age and sex being significant as well. However, to reduce the observer’s paradox (Labov 1972), data was collected at the expense of metadata about the speakers. Consequently, the relationship between speakers in his study is not known and is in fact dismissed as unimportant (Fogg 1990:147).

What makes Latter-day Saints even more ideal for studying reciprocal relationship is that the transition phase from Mutual TLN to Mutual FN is easier to study. Teenagers and adults are in a clear non-reciprocal relationship when it comes to address forms. Children up through high school age are expected to categorically refer to adults by TLN, who usually reciprocate with FN. As teenagers transition into adulthood however, they enter the age where it is acceptable to refer to other adults by FN. But there are no clear rules for when and who is addressed by this form. Because of the uncertainty, this transition phase extends from just five minutes of conversation to as long as several months or more.

Therefore, this study presents additional findings on address forms among Latter-day Saints, but with a special emphasis on young individuals, a more sophisticated measure of the relationship between individuals, and a more rigid coding for situation.

2.2 Terminology

Note that in this paper, the terms *ego* and *alter* are borrowed from social network theory (Chung, Hossain and Davis 2005:3). The *ego* is the speaker, and the *alter* is the person whose name is being said. As will be seen later, in some situations the *alter* is the addressee, and the *ego* is talking *to* them. But in other situations the *ego* is talking to a different addressee *about* the *alter*. Thus, the terms *ego* and *alter* are used to avoid possible ambiguity of the term *Addressee*, which is reserved for a particular audience type, as will be shown hereafter.

3 Methodology

This study uses data collected from a survey, which was fit to a logistic regression model. The

²Other titles do exist, such as *Bishop*, *President*, or *Elder*, which are reserved for individuals serving in specific leadership positions, and also, in the case of *Elder*, for male missionaries.

details of the participants, the survey, the independent variables, and the analysis are explained below.

3.1 Participant Selection

The target population for this study are all married couples who are in their 20s and early 30s, and who are regular attendees of the *Athens 1st Ward*, one of four LDS congregations in Athens, Georgia. It is not feasible to attempt a random sample of all LDS young adults, so the results from this study strictly speaking can only be said about these 42 individuals. Hopefully they have some similarity with all LDS young adults.

Younger participants were chosen because of presumed high variation between them, as mentioned previously. In this group, the ages ranged from 20–36, with a mean of 28. Since an age difference of about 15 years has shown to be an indicator of a status change (Brown and Ford 1961:377), these individuals are considered equals, as far as age is concerned. Presumably then, age difference would not be a significant factor within this group as it has been in other communities.

Unmarried individuals were excluded because anecdotal evidence suggests that marital status plays an important role in address forms. Specifically, singles appear to be called more by FN than married individuals. However, there are not many singles in the *Athens 1st Ward* because the majority attend a local singles congregation, so the few who do attend do not make a large enough group for a representative sample. Thus, in order to preserve the homogeneity of the group, divorcees, single parents, and other unmarried individuals within the age range were excluded from study.

The *Athens 1st Ward* was selected for three reasons. First, its geographical area covers much of the student housing for the University of Georgia, so there is an unusually large proportion of young, married people (roughly one-third) in the congregation. Second, as is expected in college towns, there is a high turnover rate, forcing social networks and relationships to be in constant flux. Because of this, each member presumably sees a range of strangers, acquaintances, and friends in the congregation at any given time. Third, access to these individuals was greatly facilitated because the *Athens 1st Ward* is my own congregation.

This group of 42 individuals is fairly homogenous: they are white, educated, were all raised as Latter-day Saints, and as previously mentioned are roughly the same age. Still though, there are some differences in them. They have been married from six months to 10 years and have 0–5 children. About half are from the South. Some of the participants are siblings, in-laws, or cousins. Occupations range from undergraduate students to small business owners. Since the individuals in this group have many common traits, especially those that are normally used to indicate non-reciprocal relationships for address forms, any variation that may exist must be caused by some other factor(s).

Though my wife and I are a part the target population and are very much integrated into the social networks of this group, we were not included in the survey. Had we been included, the answers would have been skewed significantly.

3.2 Survey

Data was collected by means of a survey, administered to each of the 42 individuals (Figure 1). The survey took the form of a table to be filled out. Down the side were the 42 participants' names, while across the top were four main columns. Participants were asked to indicate what they would call each of the other participants, given four situations. Since avoidance techniques were not the focus of this study, they were specifically asked to indicate the name they would use assuming they *had* to use a name.

The survey was designed to be as brief as possible, with little effort by the participants to complete. Subcolumns under each of the four situations indicated the two most likely options ("First" = FN and "Bro/Sis" = TLN), with a third option to fill in any other name used. This meant participants simply needed to check a box rather than write a letter or word. This design avoided any legibility issues, and the visual separation of each option made transferring the data onto a

spreadsheet faster, easier, and more accurate.³ Participants were also asked to indicate how well they know each person, from 1 (“never/hardly met”) to 5 (“good friends”). The survey took 10–15 minutes to complete.

26 Your Age	Situation 1			Situation 2			Situation 3			Situation 4			How well do you know this person?
	First	Bro/Sis	Other	First	Bro/Sis	Other	First	Bro/Sis	Other	First	Bro/Sis	Other	
Amanda Johnson	/				/			/			/		1 0 3 4 5
Chris Moore		/			/			/			/		0 2 3 4 5
Brooke Young		/			/				FULL			FULL	1 2 0 4 5
Dan Miller	/			/			/			/			1 2 3 4 0
Justin Lee		/			/			/			/		0 2 3 4 5
Megan White	/			/			/				/		1 2 3 0 5

Figure 1: A sample of the survey. Names have been changed.

Participants were approached at their church building on a Sunday, either before or after services, were given a brief explanation of the study, and were handed an envelope. Contained inside the envelope were further details, including full disclosure the study’s purpose. It also explained the four situations (see below). The instructions asked participants to return the survey at church the following Sunday so as to give them ample time to complete it at home at their convenience (though one couple returned theirs immediately after services were finished). Other than a reminder email that was sent out the following Saturday, participants were not approached about the survey or pressured into completing it in any way. In total, 31 surveys were returned, and, excluding any unusual tokens, contained 5,134 address forms and 1,025 relationship data points.

3.3 Audience Design

In order to operationalize the situations, *audience design* was used as a model (Bell 1984). Audience design is based on the idea that speakers accommodate their style based on the addressee (Labov 1972), but takes this idea further by accounting for other listeners who are said to also influence the speaker. Bell proposes four audience types with various properties, placed metaphorically (and sometimes physically) further and further from the speaker, thus causing less and less of an influence on them. Though one study dismisses third person referents “not through empirical data but from logical analysis” (Fogg 1990:140), it has been shown that speakers make a difference when talking to someone and talking about them (Dickey 1997). Audience design provides a convenient and systematic way to analyze the three different third-person referents in addition to the addressee.

The first audience type is the *Addressee*,⁴ which is an audience member that is known by the speaker, ratified as part of the conversation, and specifically addressed. If the speaker were a TA the students in the classroom would be addressees. Next are *Auditors*, who are known and ratified by the speaker, but not specifically addressed. If a professor were observing the TA’s teaching, she would be an Auditor. *Overhearers* are known by the speaker, but not addressed and not ratified as part of the conversation. The teacher across the hallway, who the TA knows can hear his lecture, but is neither part of the conversation nor addressed, would be an Overhearer. Finally, *Eavesdroppers* are unaddressed, unrati ed, and unknown by the speaker. If a student in the hallway were sitting outside the room unbeknownst to the TA, she would be an eavesdropper. Since the speaker is unaware of them, eavesdroppers by definition have no influence over the speaker. A summary of the audience types and their properties can be found in Table 1.

³I acknowledge that this probably primes the participants into being more likely to indicate one of the first two columns—and most of them did. However, there was a sizeable amount of data for other address forms (roughly 10%), that were grouped together with TLN.

⁴Addressee as an audience type is capitalized in order to distinguish it from other addressees. All other audience types follow this same convention.

	addressed	ratified	known
<i>Addressee</i>	+	+	+
<i>Auditor</i>	-	+	+
<i>Overhearer</i>	-	-	+
<i>Eavesdropper</i>	-	-	-

Table 1: Audience types and their properties. (from Bell 1984:160)

Because of the nature of the four audience types, audience design has an implicational hierarchy built in to its definition. The theory states that if there is linguistic variation when a particular individual is of one audience type, that presupposes that same variation when that same individual is of audience types closer to the speaker (Bell 1984:160). So for this study, if more FN is reported for Auditors than for Overhearers and Eavesdroppers, there should be as much or more FN for Addressees as well.

3.4 The Four Situations

The specific situations in this study refer to various aspects of Mormon culture, whose explanations would be tangential for the purposes of this paper. The following summaries should suffice.

For the first situation, participants were asked to imagine catching the alter's attention in the hallway at church order to start up a conversation with them. The second situation placed the ego in a small, informal committee meeting with the alter and a few other people. The ego wants to refer to something the alter said earlier in the meeting, when addressing the rest of the group ("Like *so-and-so* said earlier, I think we should..."). Thus the alter is present, though not specifically addressed. Situations 3 and 4 had the ego talking to their spouse about the alter. Situation 3 had them at church, where there is a possibility of the alter overhearing, and situation 4 was driving home from church, with no chance the alter could overhear.

Again, audience design was used in order to better operationalize the four situations. If linguistic variation happens in one situation but not another, the properties of the audience types in Table 1 will determine what the trigger was.

3.5 Explanatory Variables

The 17 explanatory variables used in this study fall under four categories: those pertaining to the ego, the alter, both, and neither.

Data about the ego and alter included their age, with the hypothesis that since all participants are within a 15-year age range, there would not be any significance (Brown and Ford 1961). However, I have included this in the model to see whether a smaller difference would be significant. Specifically, I hypothesize that an age difference of about 7 years, meaning the two were teenagers at the same time, will trigger a status change. The gender of each participant was also included, since previous studies have shown this to be a significant factor (Kramer 1975). Based on my own anecdotal evidence, I have included whether the participants are parents, whether they are or have served in local church leadership, and, in the case of the ego only, whether they were raised in the South. The hypothesis is that parents receive less FN than married couples without children, local leaders receive less FN due to their leadership status, and southerners use more TLN.

Additionally, the relationship between the ego and the alter was measured in two ways. First was the 1–5 scale the ego indicated about the alter, with the assumption that the closer they are, the more likely they are to use FN (Brown and Gilman 1960). Also, since some of the participants are related, their familial relationship was also included,⁵ with the hypothesis that family members would be very much less inclined to use TLN for each other in any situation (Ervin-Tripp 1971, Dickey 1997).

The one factor that was independent of the ego and alter was the situation, as described above, which, for reasons explained hereafter, was coded as a categorical rather than an ordinal variable.

3.5.1 Social Network Analysis

⁵This was coded as a three-level ordinal variable: married/siblings > in-laws/cousins > not related.

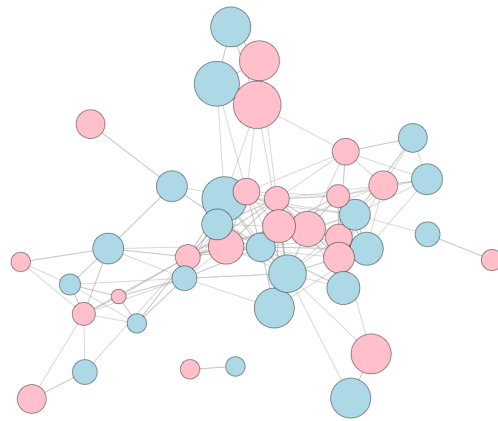


Figure 2: A visualization of the participants' social network. Gender is represented by their stereotypical color, and age by size of the circle (older = larger). Connecting lines indicate that at least one of the two individuals valued their relationship as a level 5 on the survey. Plotted using the *igraph* library in R.

Because of the 1–5 scale of the relationships in the survey, this dataset is ideal for social network analysis. For this study, I tested various centrality scores to see how well-connected a particular individual is within the social group. The only one that proved useful was the eigenvector centrality score (ECS), which, on a scale of 0–1, measures how well-connected an individual is to other well-connected members of the group (Bonacich 1987). Essentially, the more central a participant's circle is in Figure 2, the higher their ECS. The relationship data between each person was used to calculate ECS of both the ego and the alter using the `evcent()` function in the *igraph* library in R, which was then used as factors for predicting what address form the ego uses for the alter.

3.6 Analysis

Using the statistical software JMP, a logistic regression model was fit to the data. This is a type of model, appropriate for a binary dependent variable, determines the odds of FN being used (as opposed to TLN or FLN) given a number of independent variables.

Some slight adjustments were made to the original variables. Since the responses for situation 4 were almost identical to situation 3, they were collapsed down to form just one Eavesdropper/Overhearer situation. Additionally, while these last two situations are interesting in that they control for the addressee, the relationship between the spouse and the alter was too similar to the relationship between the ego and the alter. In order to avoid the collinearity this introduced to the model, the spouse-alter relationship was excluded from the model.

To determine what interactions to include in the model, a forward stepwise procedure was conducted using minimum BIC as the stopping rule.⁶ All mathematically possible two-way interactions were included as potential variables. Additionally, variables that come in pairs (sex of the ego and alter, age of the ego and alter, etc.) were crossed with every other variable to create three-way interaction terms, and with other pairs to make four-way interactions. Other three-way interactions were added, based on intuition of the dataset.

In the end, out of the 302 possible variables, the procedure suggested a model that included some 30 interaction terms, which were weeded down further by common sense and intuition. The final model included all the main effects in Section 3.5 except information about the age and ECS

⁶Minimum BIC is similar to using p-values to determine which variables to include or exclude in a stepwise procedure. The difference is that it gives a harsher penalty for the addition of more variables, so not only does an additional variable have to be significant, but it must contribute to the model more than the penalty. This results in a model with fewer variables that is more easily interpretable and good for explanation, while the p-value approach is harder to interpret but better for prediction since it typically includes more variables. Since the goal of this study is for interpretation, minimum BIC is the preferred method.

of the alter, which were not significant enough to be included. Additionally, 16 interaction terms were included, including one three-way interaction. The model itself was statistically significant ($\chi^2 = 3586.87$, $df = 50$, $p < 0.0001$) and could correctly predict the address form 85.8% of the time.

4 Results

Overall, FN was reported 1,995 of the 5,134 (38.86%) times with the average relationship being 2.45. But due to the nature of the numerous significant interactions, even with minimum BIC as the stopping method, it becomes difficult to interpret the model's coefficients and estimate the likelihood of FN when variables change. Therefore, it is not possible to indicate for example, the odds that a man uses FN when compared to a woman, because it depends on all other factors in the model. Instead, I present the following trends which should provide a general picture of results.

In general, the effect of the different situations was dependent on several factors. Men showed a slight increase of FN as the alter gets metaphorically distant ($1 < 2 < 3, 4$); for women, the opposite was true. Southerners generally followed the same trend, but were different in that they reported a sharp decrease in FN towards Auditors, which gets more pronounced with age and an increased social well-connectedness. In fact, a three-way interaction between situation, sex, and whether the ego is southern proved statistically significant in the model since each of the four groups (southern men, southern women, non-southern men, non-southern women) responded differently to the situations. For the other situations, place of birth was not a significant factor. As was mentioned previously, the difference between the Overhearer and Eavesdropper was not significant for anyone. Because of this unexpected dip in the Auditor situation, it made more sense to code the situation as categorical rather than ordinal.

One strong predictor of FN was how well the ego knows the alter. The pattern follows an S-curve with a very small likelihood of FN for strangers, and a higher chance for close friends. The shape, steepness, and maximum height changes depending on all other factors, but the general trend remains the same.

The odds of using FN was also dependent on the sex of the ego and the alter. As previously mentioned, women use more FN when talking *to* someone, while men use more FN when talking *about* them. Additionally, men use more FN if they do not have children and if they are less socially well-connected, but women use more FN if they are mothers and if they have a higher ECS. For all other cases, men used slightly more FN than women. Finally, while both sexes used more FN when they are the same sex as the alter, women were called by FN more than men were.

It was unsurprising that age was correlated with parenthood since parents tend to be older than the couples without children. Given two younger people of the same age, the parent is predicted to use more FN than the individual without children. However, if those two are older, the parent was the one that used more FN. Overall though, younger individuals used more FN than the older participants. As was mentioned previously, this is especially true towards Auditors. Finally, parents used more FN towards other parents while individuals without children used more FN between themselves.

Local leadership had an influence as well. Individuals in leadership positions disfavored FN all around. In fact, whether the ego was in a leadership position was one of the only variables that did not interact with another, so it can be easily calculated that they are 225% more likely to use TLN than an equivalent person not serving in local leadership. Regarding address forms towards leaders, individuals with a lower ECS used more FN towards leaders, and more well-connected people used less FN for leaders.

The effects of social well-connectedness have already been mentioned as interactions with other variables. But to summarize, it has different effects on different groups of people. For men, it has little effect, while higher ECS predicts more FN for women. Meanwhile higher ECS implies less FN towards local leadership.

As was mentioned previously, the alter's age and their ECS score were not significant factors.

5 Discussion

To my knowledge, previous studies of forms of address have not analyzed the data with this much

scrutiny, and as a result, their results are slightly more superficial. The overall result from the detail in this model is that the variables that proved significant in non-reciprocal relationships were not as significant within group of reciprocal relationships.

One of the most obvious results from this study is that, contrary to the second quote in Section 2, familiarity *is* a factor between people of the same age and rank, and there *are* options for what an ego uses for an alter (cf., Ervin-Tripp 1971:19). It is clear that when only 38.86% of the data consist of the more casual form, even among equals, there is significant variation in this group.

In her study of address forms between family members, Dickey (1997) found that if the ego and the alter are equals, they always use FN. However, in the current model, familial relationships were not important, suggesting that participants followed the same trends when referring to their own family as they would with other people. Indeed, siblings, in-laws, and cousins all reported TLN some of the time. In fact, six men indicated that they would call their own wives by TLN in the committee meeting situation. This interesting use of TLN is not likely to appear in many other communities.

The findings regarding the sex of the ego and alter coincide with what has been reported in the past. Rubin (1981) states that women overall used more FN and were also called by FN more than men were (see also Takiff, Sanchez and Stewart 2001). In this LDS community, this is still the case. This effect is compounded when women are talking to other women, and the result is greater than the sum of the parts. Fogg (1990:151), who saw the same results in his data, attributes this to a "high degree of intimacy and camaraderie among Latter-day Saint women".

Age was treated differently in this group of equals than it has been in previous studies of non-reciprocal relationships. In the past, age difference was an important factor (Brown and Ford 1961, Fogg 1990, Dickey 1997, Murray 2002). However, in this community, the age of the alter was insignificant, and did not even reach statistical significance to be included in the regression model. This is somewhat unsurprising, since the participants were chosen specifically because they were within about a 15-year age difference.

I previously hypothesized that a difference of 7 years would trigger a minor status change. While on the surface this turned out to be the case, there was no evidence for this that could not be explained by other factors, particularly relationship. In other words, participants tended to be friends with people closer in age, and it was this greater familiarity that led to more FN rather than age difference alone.

While age difference was not significant, the absolute age of the ego was a useful predictor of FN. The fact that younger people in general reported more FN than the older group was unexpected, since as teenagers they presumably referred to adults by TLN categorically. This is likely due to cultural changes in the younger group, in the form of fewer address forms in general.

Parenthood, as far as I am aware, has not been shown to be a significant sociolinguistic variable. However, parents were called by FN less than individuals without children, and the parents themselves, especially mothers, behaved differently in that they used more FN the older they were. This may have to do with the strong, family-centered nature of this religion and culture: a person in some ways may not be truly considered a "grown-up" until they are married and have the responsibility of taking care of children. While further evidence is welcome to support this idea, the current data suggests that this community shows respect towards parenthood by using the more formal address form.

The interaction between parents and non-parents was interesting as well. Parents used more FN towards other parents, while those without children used more FN for each other. Undoubtedly this has to do with who these people tend to be friends with, and the relationship between people is already a strong factor. However, parents receive significantly less FN from non-parents than would be expected by looking at relationship data alone. This may be further evidence that parenthood is seen as a status change for this community.

As mentioned above, local leaders used 225% more TLN than the rest of the group. This blanket decrease in FN is likely due to what kinds of interactions these leaders have with others. All four situations placed the participants in various conversations that would happen on a Sunday at church. These are the times when local leadership is acting as the leaders of this group, who therefore express this role in part by using more of the formal address form than they would on other days of the week or in other places. The rest of the congregation responds to this by reciprocating with the more formal TLN.

The inclusion of social network data proved fruitful, and its effect was very different for different people. As was mentioned previously, it has little effect on men, a positive effect on women, and a negative effect when talking to local leadership. Unlike many other variables, the participants themselves may not have a very good intuition of their or another person's ECS, which makes it all the more interesting that certain trends occurred. The prediction that women use more FN if they are socially well-connected provides additional support for the strong camaraderie among LDS women, though it is difficult to say how this extends to women in other communities since it has not been used as a factor in previous studies. Regarding why individuals with a higher ECS use less FN for leaders is a surprise and does not have a clear explanation.

The inclusion of social network analysis is new to address form studies, and was an interesting and important factor in this social group. Even though the ECS is calculated from the relationship data between participants, it did not behave the same way that the one-on-one relationships did. In other words, not only are speakers sensitive to how well they know someone, they are also sensitive to how well the community as a whole knows that person. Further research is required to say whether other communities and people in non-reciprocal relationships are affected by the eigenvector centrality score in the same way.

As was mentioned previously, some groups of people responded differently to the Auditor situation than was expected. Only non-southern women followed the expected pattern of a continuous trend of more FN with metaphoric distance ($1 > 2 > 3 \& 4$). All other groups showed a sharp decrease in situation 2, which corresponds to the Auditor in the committee meeting situation. This pattern is especially true of non-southern men and southern women. The finding that less FN is used in this situation is surprising given the implicational hierarchy of audience design (Bell 1984). It is expected that if more or less FN is triggered by the presence of an Auditor, that implies the same variation for the Addressee. If it is the case that these groups simply use less FN for Auditors, then this dataset challenges the implicational hierarchy of audience design.

One explanation for this irregularity may have been some ambiguity in the prompt. For situation 2, participants were asked to imagine a "small committee meeting." While such meetings are common among members of the LDS community, leadership meetings are primarily attended by men, whereas women can be more involved in service committees or event planning. These leadership meetings are somewhat more formal than other meetings. What may be going on here is that men are imagining a more formal situation than the women are, and since Fogg's (1990) strongest predictor was the formality of the situation, this anomaly may simply be a function of formality rather than audience type.

The other interesting result is that southerners seem particularly sensitive to this situation and reported significantly less FN than non-southerners. It is generally known that titles are more common in the South, and this may be a clear case of some regional differences between people in this congregation. This is one case where the use of a particular form says less about about the alter or the relationship between the two and more about the speaker (Braun 1988:24).

Finally, the other unique pattern with this situation is that it gets stronger with age. The older participants reported less FN in situation 2. In fact, the younger participants reported *more* FN in this situation than any other. One reason for this is that the older individuals are more likely to participate in leadership meetings, which could be another manifestation of formality being a strong predictor.

A future investigation is necessary to further specify what kind of meeting triggers this change. I speculate that various properties of meetings could indicate formality, including whether the meeting is held on a Sunday, if local leadership is present, its regularity, and the purpose of the meeting.

6 Conclusion

Various elements from sociolinguistics, network analysis, and statistics were combined in this study to uncover interesting and unique patterns of address forms in a Latter-day Saint community. In particular, when important factors for non-reciprocal relationships such as age, power, and status are held constant, new patterns emerged as speakers were forced to react to other variables such as audience design, social network, parenthood, and being southern. This is in stark contrast to previous literature on address forms, which assume little or no variation in reciprocal relation-

ships.

This research was largely exploratory and was aimed at discovering patterns, and many interesting patterns emerged, but further investigation is required in order to better explain them. For example, are there different Auditor situations that speakers react to? Are there other geographic trends? Additionally, there are many questions about forms of address among Latter-day Saints that remain unanswered. What differences are there (if any) among middle-aged and elderly members? Is marital status a significant factor, and if so, how do single parents, divorcees, or same-sex couples fit in? Do members of this community apply this address form system to non-LDS situations? How is the system acquired by adult converts?

The most obvious need for future work is to expand the study to include many more participants in many more congregations. Data from this congregation had statistically significant trends, but whether they apply to the LDS community as a whole can only be tested using a more representative sample.

While this study has brought some results into light, there are many questions remaining about forms of address among Latter-day Saints, and about reciprocal relationships in general. If audience design, social networking, parenthood, and being southern affect address forms in this community, what other aspects of language are sensitive to these factors, and what other communities also react to these variables? Hopefully, this is one of the first of many studies in this fruitful but largely untouched speech community.

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